

RAW SEQUENCE LISTING

DATE: 12/20/2001

PATENT APPLICATION: US/09/884,260A

TIME: 09:23:29

Input Set : A:\W121110.txt

Output Set: N:\CRF3\12192001\I884260A.raw

4 <110> APPLICANT: Alan Brash
 5 Nathalie Tijet
 8 <120> TITLE OF INVENTION: MUSKMELON (CUCUMIS MELO) HYDROPEROXIDE
 9 LYASE AND USES THEREOF
 12 <130> FILE REFERENCE: 06027.0002U2
 14 <140> CURRENT APPLICATION NUMBER: 09/884,260A
 15 <141> CURRENT FILING DATE: 2001-06-19
 17 <150> PRIOR APPLICATION NUMBER: 09/,537,357
 18 <151> PRIOR FILING DATE: 2000-03-29
 20 <160> NUMBER OF SEQ ID NOS: 56
 22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 24 <210> SEQ ID NO: 1
 25 <211> LENGTH: 10
 26 <212> TYPE: PRT
 27 <213> ORGANISM: Cucumis melo
 30 <400> SEQUENCE: 1
 31 Met Ala Thr Pro Ser Ser Ser Pro Glu
 32 1 5 10
 34 <210> SEQ ID NO: 2
 35 <211> LENGTH: 15
 36 <212> TYPE: PRT
 37 <213> ORGANISM: Cucumis melo
 39 <400> SEQUENCE: 2
 40 Ile Leu Phe Asp Thr Ala Lys Val Glu Lys Arg Asn Ile Leu Asp
 41 1 5 10 15
 43 <210> SEQ ID NO: 3
 44 <211> LENGTH: 8
 45 <212> TYPE: PRT
 46 <213> ORGANISM: Cucumis melo
 48 <400> SEQUENCE: 3
 49 Arg Leu Phe Leu Ser Phe Leu Ala
 50 1 5
 52 <210> SEQ ID NO: 4
 53 <211> LENGTH: 7
 54 <212> TYPE: PRT
 55 <213> ORGANISM: Cucumis melo
 57 <400> SEQUENCE: 4
 58 Ser Ile Ser Asp Ser Met Ser
 59 1 5
 61 <210> SEQ ID NO: 5
 62 <211> LENGTH: 8
 63 <212> TYPE: PRT
 64 <213> ORGANISM: Cucumis melo
 66 <400> SEQUENCE: 5
 67 Leu Leu Ser Asp Gly Thr Pro Asp
 68 1 5
 70 <210> SEQ ID NO: 6

ENTERED

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71 <211> LENGTH: 10
72 <212> TYPE: PRT
73 <213> ORGANISM: Cucumis melo
75 <400> SEQUENCE: 6
76 Ile Phe Ser Val Phe Glu Asp Leu Val Ile
77 1 5 10
79 <210> SEQ ID NO: 7
80 <211> LENGTH: 481
81 <212> TYPE: PRT
82 <213> ORGANISM: Cucumis melo
84 <400> SEQUENCE: 7
85 Met Ala Thr Pro Ser Ser Ser Pro Glu Leu Pro Leu Lys Pro Ile
86 1 5 10 15
87 Pro Gly Gly Tyr Gly Phe Pro Phe Leu Gly Pro Ile Lys Asp Arg Tyr
88 20 25 30
89 Asp Tyr Phe Tyr Phe Gln Gly Arg Asp Glu Phe Phe Arg Ser Arg Ile
90 35 40 45
91 Thr Lys Tyr Asn Ser Thr Val Phe Arg Ala Asn Met Pro Pro Gly Pro
92 50 55 60
93 Phe Ile Ser Ser Asp Ser Arg Val Val Val Leu Leu Asp Ala Leu Ser
94 65 70 75 80
95 Phe Pro Ile Leu Phe Asp Thr Ala Lys Val Glu Lys Arg Asn Ile Leu
96 85 90 95
97 Asp Gly Thr Tyr Met Pro Ser Leu Ser Phe Thr Gly Asn Ile Arg Thr
98 100 105 110
99 Cys Ala Tyr Leu Asp Pro Ser Glu Thr Glu His Ser Val Leu Lys Arg
100 115 120 125
101 Leu Phe Leu Ser Phe Leu Ala Ser Arg His Asp Arg Phe Ile Pro Leu
102 130 135 140
103 Phe Arg Ser Ser Leu Ser Glu Met Phe Val Lys Leu Glu Asp Lys Leu
104 145 150 155 160
105 Ser Glu Lys Lys Lys Ile Ala Asp Phe Asn Ser Ile Ser Asp Ser Met
106 165 170 175
107 Ser Phe Asp Tyr Val Phe Arg Leu Leu Ser Asp Gly Thr Pro Asp Ser
108 180 185 190
109 Lys Leu Ala Ala Glu Gly Pro Gly Met Phe Asp Leu Trp Leu Val Phe
110 195 200 205
111 Gln Leu Ala Pro Leu Ala Ser Ile Gly Leu Pro Lys Ile Phe Ser Val
112 210 215 220
113 Phe Glu Asp Leu Val Ile His Thr Ile Pro Leu Pro Phe Phe Pro Val
114 225 230 235 240
115 Lys Ser Gly Tyr Arg Lys Leu Tyr Glu Ala Phe Tyr Ser Ser Ser Gly
116 245 250 255
117 Ser Phe Leu Asp Glu Ala Glu Lys Gln Gly Ile Asp Arg Glu Lys Ala
118 260 265 270
119 Cys His Asn Leu Val Phe Leu Ala Gly Phe Asn Ala Tyr Gly Gly Met
120 275 280 285
121 Lys Val Leu Phe Pro Thr Leu Leu Lys Trp Val Gly Thr Ala Gly Glu
122 290 295 300

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123 Asp Leu His Arg Lys Leu Ala Glu Glu Val Arg Thr Thr Val Lys Glu
124 305                      310                      315                      320
125 Glu Gly Gly Leu Thr Phe Ser Ala Leu Glu Lys Met Ser Leu Leu Lys
126                      325                      330                      335
127 Ser Val Val Tyr Glu Ala Leu Arg Ile Glu Pro Pro Val Pro Phe Gln
128                      340                      345                      350
129 Tyr Gly Lys Ala Lys Glu Asp Ile Val Ile Gln Ser His Asp Ser Ser
130                      355                      360                      365
131 Phe Lys Ile Lys Lys Gly Glu Thr Ile Phe Gly Tyr Gln Pro Phe Ala
132                      370                      375                      380
133 Thr Lys Asp Pro Lys Ile Phe Lys Asp Ser Glu Lys Phe Val Gly Asp
134 385                      390                      395                      400
135 Arg Phe Val Gly Glu Glu Gly Glu Lys Leu Lys Tyr Val Tyr Trp
136                      405                      410                      415
137 Ser Asn Glu Arg Glu Thr Val Glu Pro Thr Ala Glu Asn Lys Gln Cys
138                      420                      425                      430
139 Pro Gly Lys Asn Leu Val Val Leu Ile Gly Arg Ile Met Val Val Glu
140                      435                      440                      445
141 Phe Phe Leu Arg Tyr Asp Thr Phe Thr Val Glu Val Ala Asp Leu Pro
142                      450                      455                      460
143 Leu Gly Pro Ala Val Lys Phe Lys Ser Leu Thr Arg Ala Thr Asp Met
144 465                      470                      475                      480
145 Val

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149 <210> SEQ ID NO: 8

150 <211> LENGTH: 1446

151 <212> TYPE: DNA

152 <213> ORGANISM: Cucumis melo

154 <400> SEQUENCE: 8

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155 atggctactc cttcttcctc ctcccttgaa ctctctctca aaccaattcc cggtggctat      60
156 ggcttccccc tctcgggtcc catcaaagac cgttacgatt acttctatatt ccaaggtaga      120
157 gacgaattct tccgttcccg gattaccaa tacaactcca ccgtcttccg cgccaacatg      180
158 ccaccgggcc cttcatttc ctccgattcc agagtcgttg tcttctctga tgccctcagt      240
159 tttcctatcc tcttcgacac agccaaagtc gagaaacgca acattctcga cggaacttac      300
160 atgccctcct tgtccttcac cggcaacatt cgcacctgtg cttatttgga cccatcgga      360
161 acagagcact ctgttctcaa acgcctcttc ctctccttcc tgccttcccg ccatgacagg      420
162 ttcattccctc tgttcgaag ctcttctgtc gagatgtttg ttaagcttga agataaactt      480
163 tccgagaaaa agaagatcgc tgatttcaac tcgatcagcg attccatgtc gtttgattat      540
164 gttttccggt tactctccga tggaaacctt gattcgaaat tagctgctga gggacctgga      600
165 atgttcgata tgtggcttgt gtttcaaact gccccatttg cttccattgg ctttcccaaa      660
166 attttctctg tttttgaaga tctcgtcatt cacaccattc ccttgccctt cttcccagtc      720
167 aagagtgggt acaggaagct ttatgaagcg ttttactcct cttctggctc atttctagac      780
168 gaagcagaga aacaggggat agacagggag aaagcatgtc acaatttagt gtttctcgct      840
169 ggattcaacg catacggggg aatgaaagtc ctttttccca ctttactgaa atgggtcggc      900
170 accgccggcg aggatctcca ccggaaactc gccaggaag tcaggacaac cgtgaaggaa      960
171 gaagggggac tgactttctc cgccttgagg aaaatgagtc tgctgaagtc cgtcgtgtac      1020
172 gaagcactca ggatcgaacc gccgggtgcc ttccagtacg ggaaagcgaa ggaggatata      1080
173 gtgattcaga gccacgattc ttctttcaag atcaaaaaag gggagacgat ttttggttat      1140
174 cagccgtttg ctactaaaga tccgaagatt tttaaggatt cggagaagtt cgtgggcgat      1200
175 aggttcgtgg gagaggaagg ggagaagctt ttgaagtatg tttactggtc aaatgagcgg      1260

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```

176 gagacagtgg agccgacggc ggagaacaag cagtgtccgg ggaagaatct ggtggtgctg      1320
177 ataggttagga ttatggtggt ggaattcttc cttcgttatg atacgttcac cgtggaggtc      1380
178 gcagatttgc cgctgggtcc ggcagtgaag ttcaagtcct taaccagagc aaccgatatg      1440
179 gtttaa                                          1446
181 <210> SEQ ID NO: 9
182 <211> LENGTH: 60
183 <212> TYPE: PRT
184 <213> ORGANISM: Psidium Guava
187 <400> SEQUENCE: 9
188 Gly Glu Leu Leu Cys Gly Tyr Gln Lys Val Val Met Thr Asp Pro Lys
189 1 5 10 15
190 Val Phe Asp Glu Pro Glu Ser Phe Asn Ser Asp Arg Phe Val Gln Asn
191 20 25 30
192 Ser Glu Leu Leu Asp Tyr Leu Tyr Trp Ser Asn Gly Pro Gln Thr Gly
193 35 40 45
194 Thr Pro Thr Glu Ser Asn Lys Gln Cys Ala Ala Lys
195 50 55 60
197 <210> SEQ ID NO: 10
198 <211> LENGTH: 61
199 <212> TYPE: PRT
200 <213> ORGANISM: Banana
202 <400> SEQUENCE: 10
203 Gly Glu Leu Leu Cys Gly Tyr Gln Pro Leu Val Met Arg Asp Pro Ala
204 1 5 10 15
205 Val Phe Asp Asp Pro Glu Thr Phe Ala Pro Glu Arg Phe Met Gly Ser
206 20 25 30
207 Gly Lys Glu Leu Leu Lys Tyr Val Phe Trp Ser Asn Gly Pro Glu Thr
208 35 40 45
209 Gly Thr Pro Thr Pro Ala Asn Lys Gln Cys Ala Ala Lys
210 50 55 60
212 <210> SEQ ID NO: 11
213 <211> LENGTH: 62
214 <212> TYPE: PRT
215 <213> ORGANISM: Capsicum annum (green pepper)
217 <400> SEQUENCE: 11
218 Gly Glu Leu Leu Cys Gly Tyr Gln Pro Leu Val Met Lys Asp Pro Lys
219 1 5 10 15
220 Val Phe Asp Glu Pro Glu Lys Phe Met Leu Glu Arg Phe Thr Lys Glu
221 20 25 30
222 Lys Gly Lys Glu Leu Leu Asn Tyr Leu Phe Trp Ser Asn Gly Pro Gln
223 35 40 45
224 Thr Gly Ser Pro Thr Glu Ser Asn Lys Gln Cys Ala Ala Lys
225 50 55 60
227 <210> SEQ ID NO: 12
228 <211> LENGTH: 62
229 <212> TYPE: PRT
230 <213> ORGANISM: Arabidopsis
232 <400> SEQUENCE: 12
233 Gly Glu Met Leu Tyr Gly Tyr Gln Pro Leu Ala Thr Arg Asp Pro Lys

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```

234 1           5           10           15
235 Ile Phe Asp Arg Ala Asp Glu Phe Val Pro Glu Arg Phe Val Gly Glu
236           20           25           30
237 Glu Gly Glu Lys Leu Leu Arg His Val Leu Trp Ser Asn Gly Pro Glu
238           35           40           45
239 Thr Glu Thr Pro Thr Val Gly Asn Lys Gln Cys Ala Gly Lys
240           50           55           60
242 <210> SEQ ID NO: 13
243 <211> LENGTH: 61
244 <212> TYPE: PRT
245 <213> ORGANISM: Flax
247 <400> SEQUENCE: 13
248 Gly Glu Met Leu Phe Gly Tyr Gln Pro Phe Ala Thr Lys Asp Pro Lys
249 1           5           10           15
250 Ile Phe Asp Arg Pro Glu Glu Phe Val Ala Asp Arg Phe Val Gly Glu
251           20           25           30
252 Gly Val Lys Leu Met Glu Tyr Val Met Trp Ser Asn Gly Pro Glu Thr
253           35           40           45
254 Glu Thr Pro Ser Val Ala Asn Lys Gln Cys Ala Gly Lys
255           50           55           60
257 <210> SEQ ID NO: 14
258 <211> LENGTH: 61
259 <212> TYPE: PRT
260 <213> ORGANISM: Guayule
262 <400> SEQUENCE: 14
263 Gly Glu Met Leu Phe Gly Tyr Gln Pro Phe Ala Thr Lys Asp Pro Lys
264 1           5           10           15
265 Val Phe Asp Arg Pro Glu Glu Phe Val Ala Asp Arg Phe Val Gly Glu
266           20           25           30
267 Gly Val Lys Leu Met Glu Tyr Val Trp Trp Ser Asn Gly Pro Glu Thr
268           35           40           45
269 Glu Ser Pro Thr Val Glu Asn Lys Gln Cys Ala Gly Lys
270           50           55           60
272 <210> SEQ ID NO: 15
273 <211> LENGTH: 487
274 <212> TYPE: PRT
275 <213> ORGANISM: Cucumis melo
278 <220> FEATURE:
279 <221> NAME/KEY: VARIANT
280 <222> LOCATION: (1)...(487)
281 <223> OTHER INFORMATION: Xaa = Any Amino Acid
283 <220> FEATURE:
284 <221> NAME/KEY: misc_feature
285 <222> LOCATION: (0)...(0)
286 <223> OTHER INFORMATION: Accession No. AF081955
289 <400> SEQUENCE: 15
290 Met Ala Thr Pro Ser Ser Ser Ser Pro Glu Leu Pro Leu Lys Pro Ile
291 1           5           10           15
293 Pro Gly Gly Tyr Gly Phe Pro Phe Leu Gly Pro Ile Lys Asp Arg Tyr

```

Use of n and/or Xaa has been detected in the Sequence Listing.
 Refer to the Sequence Listing to insure a corresponding
 explanation is presented in the <220> to <223> fields of
 each sequence using n or Xaa.

VERIFICATION SUMMARY

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Input Set : A:\W121110.txt

Output Set: N:\CRF3\12192001\I884260A.raw

L:343 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:371 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:389 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:408 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:427 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:446 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:465 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:533 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:551 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:1336 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56